



## Akucell<sup>®</sup> and Cekol<sup>®</sup> AFI CMC (Carboxymethyl Cellulose) for aquafeed

### Introduction

Carboxymethylcellulose (CMC) is an anionic, water soluble, cellulose derivative with carboxymethyl groups. It works as a strong pellet binder to produce pellets with a superior durability and hardness at low inclusion levels.

Achieve improved water stability, moisture and distribution of ingredients.

### CMC products

- Akucell<sup>®</sup> AF 0305
- Akucell<sup>®</sup> AF 2785
- Akucell<sup>®</sup> AF 3265
- Akucell<sup>®</sup> AF 3275
- Cekol<sup>®</sup> AFI 5000S
- Cekol<sup>®</sup> AFI 30000S
- Cekol<sup>®</sup> AFI 35000SB

### Features

Pellet binder for aquafeed

- Improves pellets integrity, durability and stability
- Reduces nutrient leaching and prevent fragmentation and abrasion of pellets during handling
- Highest water stability, recommended also for shrimp feed
- Effective at low inclusion levels

Starch replacement in fish feed (salmon)

- Allows partial substitution of starch in the formula, releasing space for other nutrients critical for the nutritional value

### Benefits

- Helps minimize production costs by reducing fines and dust (lower reprocessing costs)
- Nutritionally inert and does not react with nutrients in feed
- Supports easy handling and storing of feeds
- Offers flexibility of including high dust low cost feed ingredients to reduce feed formulation costs
- No effect on the smell and taste

### Inclusion level

As pellet binder:

CMC is recommended at the rate of 0.5-1 kg per ton of feed depending on formulation and processing conditions.

As starch replacer:

5 or 6 parts of starch can be replaced by 1 part of CMC. It can be used for this application up to 1%.

### Application

CMC is recommended to be added directly into the mixer. For best results, ensure accurate addition and thorough mixing of the product.



## Packaging and transport

Packing multiply paper bags with an inner polyethylene bag. The shelf life is 3 years from date of production provided when the material is stored in the original bags under dry and cool conditions. The viscosity of cellulose gum may decrease slightly in time.

## Safety and handling

Material safety data sheet (MSDS) available on request.

## Regulatory status

Regulatory status product complies with current standards and regulations of WHO/FAO, FCC and EC. Our Akucell® cellulose gum brands are GMP+ assured.



## Certifications

Our production facility is certified for the following quality standards:

FSSC 22000, ISO 9001/14001, Kosher and Halal.

Contact us directly for detailed product information and sample request  
website | [bredol.com](http://bredol.com)  
email | [bredol@nouryon.com](mailto:bredol@nouryon.com)

# Nouryon

Nouryon is a global, specialty chemicals leader. Markets and consumers worldwide rely on our essential solutions to manufacture everyday products, such as personal care, cleaning goods, paints and coatings, agriculture and food, pharmaceuticals, and building products. Furthermore, the dedication of approximately 8,300 employees with a shared commitment to our customers, business growth, safety, sustainability and innovation has resulted in a consistently strong financial performance. We operate in over 80 countries around the world with a portfolio of industry-leading brands. Visit our website and follow us @Nouryon and on LinkedIn.

All information concerning our products and/or all suggestions for handling and use contained herein (including formulation and toxicity information) are offered in good faith and are believed to be reliable. However, Nouryon makes no warranty express or implied (i) as to the accuracy or sufficiency of such information and/or suggestions, (ii) as to any product's merchantability or fitness for a particular use or (iii) that any suggested use (including use in any formulation) will not infringe any patent. Nothing contained herein shall be construed as granting or extending any license under any patent. The user must determine for itself by preliminary tests or otherwise the suitability of any product and of any information contained herein (including but not limited to formulation and toxicity information) for the user's purpose. The safety of any formulations described herein has not been established. The suitability and safety of a formulation should be confirmed in all respects by the user prior to use. The information contained herein supersedes all previously issued bulletins on the subject matter covered.

Products mentioned are trademarks of Nouryon and registered in many countries.

[nouryon.com](http://nouryon.com)